REMARKS

The above-identified application is United States application serial number 10/823,241 filed on April 12, 2004. Claims 1-21 are pending in the application. Claims 1-21 are rejected.

Rejection of Claims Under 35 USC §101

Claims 19-21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Applicants have amended Claim 19 to specify "a tangible processor usable medium having a readable program code embodied therein," limiting subject matter to tangible article of manufacture embodiments. The amended claim thus avoids the issue of application to electromagnetic signals which is irrelevant in the amended claims since program code that is supplied via electromagnetic signals is embodied in a tangible computer-readable medium albeit either local to or remote from the controller.

Applicants have also amended the claims to remove "capable of" language as directed by the Examiner.

Rejection of Claims Under 35 USC §112

Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants have amended the claims to remove the term "critical" from "resource queue". The term "resource" is retained to indicate that the queue is used to hold commands directed to a particular resource.

Applicants have amended the claims to delete the term "high" and describe a predefined or predetermined level. Applicants have similarly deleted the term "high" in usage of a "high consumption condition" and described the condition as a predetermined or predefined consumption condition. Applicants believe the term "consumption" is clear

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in normal usage as "usage" or "utilization" of a resource that can be depleted, as would be readily understood by one of ordinary skill in the art.

Applicants have amended the claims to specify that issue of subsequent claims is "prevented" and "re-enabled" or "enabled".

Applicants have amended the claims to specify that a "client/server combination," an adapter/LUN combination," and a "source/client combination" respectively relate to a combination formed by a client, adapter, and source that sends a command to a particular server, LUN, or client to form the combination.

Applicants have amended the claims to describe queuing or queue order to "a" queuing or queue order, indicating that any suitable queuing order can be implemented for a particular embodiment or application as is known by those of ordinary skill in the art. The Examiner aptly describes two possible queuing orders as FIFO and LIFO, although any suitable order can be used.

Rejection of Claims Under 35 USC §102

Claims 1-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Chen et al. (US Publication Number 2003/0041115), hereinafter Chen. Applicants traverse the rejections. Claims 1-7 are distinguished at least because Chen does not disclose "preventing issue of subsequent commands from a client to a server in a client/server combination in response to a command of the client/server combination that increases resource consumption to the predetermined level" or "re-enabling issue of commands from the client to the server in the client/server combination." Chen does not manage a queue by selectively preventing and re-enabling issue of commands but rather sweeps or removes messages from the queue. Also, Chen does not disclose "queuing an identifier of the client/server combination on a waiting queue" or "removing the client/server combination identifier from the waiting queue in a queuing order as resource consumption declines." Chen does not use or operate upon "identifier[s] of the client/server combination" and does not place such identifiers on a queue for managing resources. Instead, Chen sweeps or removes messages from the queue to another (memory) portion of the queue when the queue is swept.

Page 9 of 13

1015.P107 US   Serial No. 10/823,241

Applicants claim a method in which resource queues are used to store commands which are managed according to the client issuing the command and the server to which the command is issued. In a high consumption condition, issuing of commands is prevented, but restored upon relief of the high consumption condition. An identifier queue of client/server identifiers is used to determine which clients and servers are restored to service first. In contrast, Chen discloses a method in which messages are stored on a queue with a memory portion and a storage portion. In a high consumption condition, messages are moved from the memory portion to the storage portion, and restored when the condition terminates.

Claim 3 further distinguishes over Chen which does not disclose "enabling issue of commands of a client/server combination in order of queuing as resource availability is restored." Chen does not disclose prevent of issue and thus does not enable issue after restoration.

Claim 4 further distinguishes over Chen at least because Chen does not teach "rejecting subsequent commands issued by the client to the server" after a high consumption condition is determined. Chen does not describe management of resources by managing issue of commands but rather by sweeping the queue.

Claims 5 and 6 further distinguish over Chen which does not disclose "queuing an identifier of the client/server combination on a waiting queue associated with the resource" or "removing a client/server combination identifier from the waiting queue." Chen does not disclose management of resources using client/server identifiers.

Claims 8-14 are distinguished at least because Chen does not disclose "a logic that . . . an adapter that issues commands to a LUN in an adapter/LUN combination associated with a command . . . , queues the identified adapter/LUN combination on a waiting queue, and prevents issue of subsequent commands of the identified adapter/LUN combination."

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Claim 9 further distinguishes over Chen at least because Chen does not teach "a logic that . . . dequeues the adapter/LUN combination identifier from the waiting queue, and re-enables commands of the dequeued adapter/LUN combination."

1015-P107 US

Serial No. 10/823,241

Claim 12 further distinguishes over Chen which does not disclose "a logic that . . . rejects subsequent commands issued by the adapter to the LUN."

Claims 13 and 14 further distinguish over Chen which does not teach "a logic that . . . queues an identifier of the adapter/LUN combination on a waiting queue associated with the resource" or "a logic that . . . removes an adapter/LUN combination identifier from the waiting queue in the queue order, and enables subsequent commands of the adapter/LUN combination removed from the waiting queue."

Claims 15-18 distinguish over Chen at least on the basis that Chen does not disclose "a logic that . . . identifies a source that issues commands to a client in a source/client combination associated with a command that contributes to the predetermined resource consumption condition, queues the identified source/client combination on a waiting queue, and prevents issue of subsequent commands of the identified source/client combination."

Claim 16 further distinguishes over Chen at least because Chen does not teach "a logic that . . . rejects subsequent commands issued by the client to the server."

Claim 17 further distinguishes over Chen which does not disclose "a logic that . . . queues an identifier of the client/server combination on a waiting queue associated with the resource."

Claim 18 further distinguishes over Chen which does not disclose "a logic that . . . removes a client/server combination identifier from the waiting queue in the queue order, and enables subsequent commands of the client/server combination removed from the waiting queue."

Claims 19-21 distinguish over Chen at least on the basis that Chen does not disclose "a code causing the controller to prevent issue of subsequent commands from a client to a server in a client/server combination; a code causing the controller to queue an identifier of the client/server combination on a waiting queue; a code causing the controller to remove the client/server combination identifier from the waiting queue; and a

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1015.P107 US   Serial No. 10/823,241

code causing the controller to enable issue of commands from the client to the server in the client/server combination."

Claim 20 further distinguishes over Chen at least because Chen does not teach "a code causing the controller to reject subsequent commands issued by the client to the server."
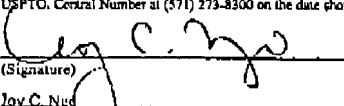
Claim 21 further distinguishes over Chen at least because Chen does not teach "a code causing the controller to queue an identifier of the client/server combination on a waiting queue associated with the resource; a code causing the controller to remove a client/server combination identifier from the waiting queue . . . ; and a code causing the controller to enable subsequent commands of the client/server combination."

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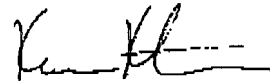1015.P107 US   Serial No. 10/823,241

CONCLUSION

Applicants believe all remaining claims are in form for allowance and a notice to that effect is solicited. No new matter has been added. In the event it would facilitate prosecution of this application, the Examiner is invited to telephone the undersigned at (949) 251-0250.

I hereby certify that this correspondence is being facsimile transmitted to the USPTO, Central Number at (571) 273-8300 on the date shown below:

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Page 13 of 13

1015.P107 US   Serial No. 10/823,241

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